VOLUME 1 1974

VOL.
1
74/75

PREVIEWS OF HEAT AND MASS TRANSFER

A Journal of the International Centre for Heat and Mass Transfer

Rumford Publishing Company, Inc.

PREVIEWS OF HEAT AND MASS TRANSFER

A Journal of the International Centre for Heat and Mass Transfer

EDITORS

J. P. HARTNETT
University of Illinois
Chicago Circle, USA

T. F. IRVINE, JR.
State University of
New York, Stony Brook, USA

A. V. LUIKOV
Institute of Heat and Mass
Transfer, Minsk, USSR

Z. ZARIĆ
Boris Kidrič Institute
Belgrade, Yugoslavia

A. A. ŽUKAUSKAS
Lithuanian Academy of Sciences
Vilnius, USSR

VOL.
1
1974/75

A publication of the
INTERNATIONAL CENTRE FOR HEAT AND MASS TRANSFER

Institutional Members

American Geophysical Union
American Institute of Chemical Engineers
American Society of Mechanical Engineers
Associazione Termotecnica Italiana
Canadian Society for Chemical Engineering
Canadian Society for Mechanical Engineering
Egyptian Society of Engineers
Indian National Committee for Heat and Mass Transfer
Institution of Chemical Engineers, London
Institution of Engineers of Australia
Institution of Mechanical Engineers, London
Israel Institute of Chemical Engineers
Koninklijk Instituut van Ingenieurs, Netherlands
National Committee for Heat and Mass Transfer of the Academy of Sciences of the USSR
Society of Chemical Engineers of Japan
Societé Française des Thermiciens
Verein Deutscher Ingenieure
Yugoslav Society of Heat Engineers

Subscription Rates:

$40.00 a year for Institutions and Libraries, $20.00 for individual subscribers, $18.00 for ICHMT members.
Make checks payable to, and send all orders to Rumford Publishing Co., Inc., Box 5370, Chicago, Ill. 60680.

Shipments will be made only upon receipt of remittance. All orders, remittances and communications related to subscriptions, including notifications of change of address, should be sent to *Rumford Publishing Co., Inc.*, Box 5370, Chicago, Ill. 60680. Change of address notices should provide the old as well as the new address, including postal zip code number; an address label from a recent issue should be attached to each notice. Changes will become effective within approximately 20 days. Missing copies will be replaced only if valid claims are received within 90 days from date of mailing. Replacements will not be allowed if the subscriber fails to notify *Rumford Publishing Co., Inc.* of a change of address, or if a copy is misplaced at destination. Requests for refund will be honored only prior to delivery of issue No. 1 of each volume-year.

Printed in the USA. Copyright 1974 by Rumford Publishing Co., Inc.

Published quarterly by:
RUMFORD PUBLISHING CO., INC.

L.
/75

PREVIEWS OF HEAT AND MASS TRANSFER

A Journal of the International Centre for Heat and Mass Transfer

VOLUME 1 SEPTEMBER, 1974 NUMBER 1

CONTENTS

Message from the Editors i

A. V. Luikov – An Obituary ii

Periodical Literature* 1

- A CONDUCTION 1
- B CHANNEL FLOW 4
- C BOUNDARY LAYER FLOW 9
- D FLOW WITH SEPARATED REGIONS 12
- F NATURAL CONVECTION 13
- G CONVECTION FROM ROTATING SURFACES 18
- H HEAT AND MASS TRANSFER AND FLAMES 19
- I CHANGE OF PHASE 25
- J RADIATION 31
- K LIQUID METALS 33
- L LOW DENSITY HEAT TRANSFER 33
- M MEASUREMENT TECHNIQUES 34
- N HEAT EXCHANGERS AND HEAT PIPES 35
- P GENERAL APPLICATIONS 40
- Q THERMOPHYSICAL PROPERTIES 42
- R HEAT AND MASS TRANSFER IN THE ENVIRONMENT 44
- S ENERGETICS 45
- T BIOMEDICAL HEAT TRANSFER 45

Contributing Journals 46

Technical Reports and Publications 48

Books 75

New Members of the International Centre for Heat and Mass Transfer 80

Newsletter of the Centre 81

Calendar of Coming Events 85

*All papers are grouped under the headings listed. Although a number of papers could have been listed under several headings, this was not done in order to conserve space.

VOL. 1 1974/7

PREVIEWS OF HEAT AND MASS TRANSFER

A Journal of the International Centre for Heat and Mass Transfer

VOLUME 1 | JANUARY, 1975 | NUMBER 2

CONTENTS

Message From the Editors i

J. L. Novotny – An Obituary ii

Periodical Literature* 1

- *A* CONDUCTION AND FINS 1
- *B* CHANNEL FLOW 6
- *C* BOUNDARY LAYER FLOW 9
- *D* FLOW WITH SEPARATED REGIONS AND JETS 10
- *E* TRANSFER MECHANISMS 12
- *F* NATURAL CONVECTION 13
- *G* ROTATING AND VIBRATING SYSTEMS 17
- *H* HEAT AND MASS TRANSFER AND FLAMES 18
- *I* CHANGE OF PHASE 22
- *J* RADIATION 28
- *L* LOW DENSITY HEAT TRANSFER 29
- *M* MEASUREMENT TECHNIQUES 30
- *N* HEAT EXCHANGERS AND HEAT PIPES 33
- *P* GENERAL APPLICATIONS 39
- *Q* THERMOPHYSICAL PROPERTIES 41
- *R* HEAT AND MASS TRANSFER IN THE ENVIRONMENT 43
- *S* ENERGETICS 45
- *T* BIOMEDICAL HEAT TRANSFER 48

Contributing Journals 49

Technical Reports and Publications 51

Books 67

Newsletter of the Centre 73

Calendar of Coming Events 78

*All papers are grouped under the headings listed. Although a number of papers could have been listed under several headings, this was not done in order to conserve space.

PREVIEWS OF HEAT AND MASS TRANSFER

A Journal of the International Centre for Heat and Mass Transfer

VOLUME 1 APRIL, 1975 NUMBER 3

CONTENTS

Message From the Editors i

Periodical Literature* 1

- A CONDUCTION AND FINS 1
- B CHANNEL FLOW 5
- C BOUNDARY LAYER FLOW 10
- D FLOW WITH SEPARATED REGIONS AND JETS 13
- E TRANSFER MECHANISMS 15
- F NATURAL CONVECTION 17
- G ROTATING AND VIBRATING SYSTEMS 23
- H HEAT AND MASS TRANSFER AND FLAMES 25
- I MULTIPHASE SYSTEMS 29
- J RADIATION 38
- L LOW DENSITY HEAT TRANSFER 42
- M MEASUREMENT TECHNIQUES 43
- N HEAT EXCHANGERS AND HEAT PIPES 44
- P GENERAL APPLICATIONS 48
- Q THERMOPHYSICAL PROPERTIES 55
- R HEAT AND MASS TRANSFER IN THE ENVIRONMENT 58
- S ENERGETICS 62
- T BIOMEDICAL HEAT TRANSFER 64

Contributing Journals 65

Technical Reports and Publications 67

Books, Proceedings, Special Conferences and Workshops 95

Calendar of Coming Events 99

*All papers are grouped under the headings listed. Although a number of papers could have been listed under several headings, this was not done in order to conserve space.

VOL. 1 1974/75

PREVIEWS OF HEAT AND MASS TRANSFER

A Journal of the International Centre for Heat and Mass Transfer

VOLUME 1 | JULY, 1975 | NUMBER 4

CONTENTS

Message From the Editors i

Periodical Literature* 1

- *A* CONDUCTION AND FINS 1
- *B* CHANNEL FLOW 9
- *C* BOUNDARY LAYER FLOW AND FLOW OVER EXTERNAL SURFACES 16
- *D* FLOW WITH SEPARATED REGIONS AND JETS 18
- *E* TRANSFER MECHANISMS 21
- *F* NATURAL CONVECTION 22
- *G* ROTATING AND VIBRATING SYSTEMS 26
- *H* HEAT AND MASS TRANSFER AND FLAMES 27
- *I* MULTIPHASE SYSTEMS 34
- *J* RADIATION 46
- *K* LIQUID METALS 49
- *L* LOW DENSITY HEAT TRANSFER 49
- *M* MEASUREMENT TECHNIQUES 50
- *N* HEAT EXCHANGERS AND HEAT PIPES 52
- *O* METEOROLOGY AND SPACE APPLICATIONS 56
- *P* GENERAL APPLICATIONS 58
- *Q* THERMOPHYSICAL PROPERTIES 65
- *R* HEAT AND MASS TRANSFER IN THE ENVIRONMENT 70
- *S* ENERGETICS 72
- *T* HEAT TRANSFER IN BIOLOGICAL SYSTEMS 73

Contributing Journals 74

Technical Reports and Publications 76

Books, Proceedings, Special Conferences and Workshops 86

Calendar of Coming Events 93

*All papers are grouped under the headings listed. Although a number of papers could have been listed under several headings, this was not done in order to conserve space.